



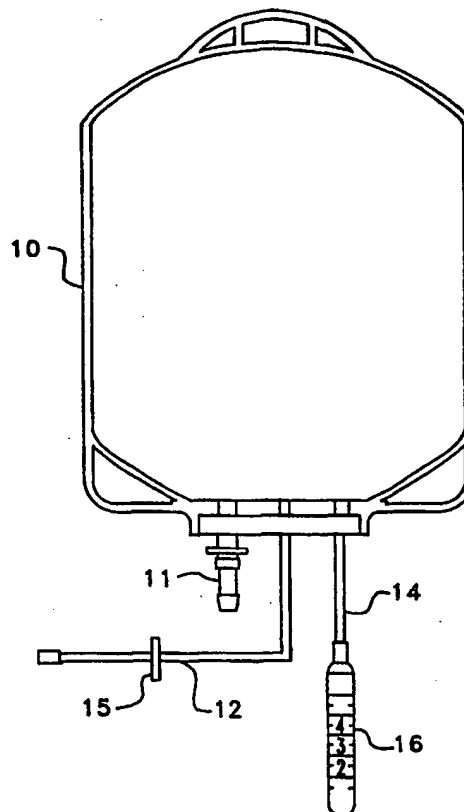
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : A61J 1/12	A3	(11) International Publication Number: WO 99/58094 (43) International Publication Date: 18 November 1999 (18.11.99)
(21) International Application Number: PCT/US99/10152 (22) International Filing Date: 10 May 1999 (10.05.99) (30) Priority Data: 09/075,695 11 May 1998 (11.05.98) US (71) Applicant: COBE LABORATORIES, INC. [US/US]; Patent Dept., 1185 Oak Street, Lakewood, CO 80215 (US). (72) Inventors: WALKER, John, Charles; 1510 Madison Court, Louisville, CO 80027 (US). BAINBRIDGE, Marlene; 16461 W. 55th Place, Golden, CO 80403 (US). CORBIN, Frank, III; 9703 W. Arlington Avenue, Littleton, CO 80123 (US). (74) Agent: O'CONNOR, Edna, M.; Cobe Patent Dept., 1201 Oak Street, Lakewood, CO 80215 (US).		(81) Designated States: CA, JP, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 9 March 2000 (09.03.00)

(54) Title: APPARATUS AND METHOD FOR BLOOD COMPONENT SAMPLING

(57) Abstract

A collection system for bodily fluids that includes a collection bag (10) and a sample bulb (16) attached to the collection bag (10). The sample bulb (16) is a one piece element blow molded of material flexible enough to be hand compressed to fill the bulb (16). The method of forming the sample bulb (16) by blow molding polymer material is also provided. The shape of the sample bulb (16) is important in maintaining a constant platelet concentration.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CJ	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						

INTERNATIONAL SEARCH REPORT

International Application No

PC., US 99/10152

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 A61J1/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 A61J A61M A61B B01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	DE 26 54 725 A (BIOVETA N P) 8 June 1977 (1977-06-08) page 6, line 13 - line 16 page 8, line 31 - page 9, line 12 page 12, line 19 - line 33 figure 1 ---	1,5,6, 10,11 2,3,8, 12,13,16
Y	US 5 132 026 A (BALUYOT RODOLFO C ET AL) 21 July 1992 (1992-07-21) column 3, line 18 - line 45 ---	2,3,8, 12,13,16
X	US 5 702 383 A (GEISSLER ULRICH C ET AL) 30 December 1997 (1997-12-30) column 2, line 66 - column 3, line 63 figures 2,3,6 --- -/-	1,5,6, 9-11

☒ Further documents are listed in the continuation of box C.☒ Priority family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"Z" document member of the same patent family

Date of the actual completion of the international search

8 September 1999

Date of mailing of the international search report

10 January 2000 (10.01.00)

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Lakkis, A

INTERNATIONAL SEARCH REPORT

International Application No

PC 1/US 99/10152

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	FR 1 320 869 A (LINTON ERIC) 4 June 1963 (1963-06-04) the whole document ---	1,5,10, 11 2,3,13, 17
X A	US 4 469 254 A (HANSEN GERHARD) 4 September 1984 (1984-09-04) column 2, line 1 - line 38 figures 1,3 claim 1 ---	10,11, 13,17 2,5
A	GB 1 169 954 A (HAIM GEORGE; PHIROZ ST JOHN DARA DERRICK) 12 November 1969 (1969-11-12) the whole document ---	10,11,16
X A	US 4 779 768 A (ST AMAND ELMER F) 25 October 1988 (1988-10-25) column 1, line 40 -column 2, line 11 column 2, line 40 - line 57 column 3, line 37 - line 46 column 5, line 14 - line 24 figure 1 ---	10,11 1-3,5, 13,17
A	WO 97 49959 A (COELHO PHILIP H ;RUBINSTEIN PABLO (US); THERMOGENESIS CORP (US)) 31 December 1997 (1997-12-31) figure 2 page 5, line 34 -page 6, line 17 -----	1,10,17

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 99/ 10152

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-18

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

1. Claims: 1-18

1.1. Claims: 1-9

A collection system for bodily fluids comprising a sample bulb wherein the sample bulb comprises a one piece element blow molded of material flexible enough to be hand compressed to fill the bulb.

1.2. Claims: 10-18

A sample bulb comprising a one-piece blow molded element having a generally cylindrical shaped main body portion, said element being formed of flexible material to allow hand compression to fill the bulb.

2. Claims: 19-20

A method of forming a one-piece sample bulb.

3. Claims: 21-26

A method of providing a sample for analysis comprising hand compressing a sample bulb, sealing and severing the sample bulb.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PL /US 99/10152

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 2654725 A	08-06-1977	CS 192067 B CH 610855 A DD 127266 A IT 1064505 B RO 70498 A	31-08-1979 15-05-1979 14-09-1977 18-02-1985 10-05-1982
US 5132026 A	21-07-1992	NONE	
US 5702383 A	30-12-1997	NONE	
FR 1320869 A	04-06-1963	NONE	
US 4469254 A	04-09-1984	CH 655652 B EP 0064248 A FR 2505044 A GB 2098175 A,B JP 1654164 C JP 3014710 B JP 57183975 A	15-05-1986 10-11-1982 05-11-1982 17-11-1982 13-04-1992 27-02-1991 12-11-1982
GB 1169954 A	12-11-1969	NONE	
US 4779768 A	25-10-1988	NONE	
WO 9749959 A	31-12-1997	AU 3483097 A CA 2258283 A EP 0946225 A	14-01-1998 31-12-1997 06-10-1999

THIS PAGE BLANK (USPTO)